CITY OF PORTSMOUTH
MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4) PROGRAM INSPECTION REPORT

June 4 through 5, 2012
Office of Compliance and Enforcement
U.S. Environmental Protection Agency
1200 Pennsylvania Avenue, NW
Washington, D.C. 20460

U.S. Environmental Protection Agency, Region III
Water Protection Division
NPDES Enforcement Branch (3WP42)
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EXECUTIVE SUMMARY

From June 4 through 5, 2012, staff from the U.S. Environmental Protection Agency (EPA) Region 3, Virginia Department of Conservation and Recreation (DCR), and EPA's contractor, Eastern Research Group, Inc. (ERG), inspected the municipal separate storm sewer system (MS4) program of the City of Portsmouth, Virginia (Portsmouth or City).

Table 1 below summarizes the observations EPA's inspection team made during the inspection.

Table 1. Summary of Permit Requirements and Inspection Observations

Permit Requirement	Observations
Part I.A.1.b. Illicit Discharge Detection and Elimination	**Observation 1:** Portsmouth has an illicit discharge field screening program in place, but the data generated from the field screening program is not being used to identify all the sources of pollutants entering the storm sewer. **Observation 2:** Portsmouth currently has a system to respond to citizen complaints or observations by city staff of illicit discharges, but the Tidemark tracking database does not include information on follow up activities or closure.
Portsmouth Stormwater Management Plan, May, 2006; Section 8.2 - Municipal Operation Centers Source Prevention; BMP 8.2.a - Annual Inspections of City Yards & Section 8.3 of the SWMP - Source Prevention at Other Facilities	**Observation 3:** Portsmouth has not conducted on-site investigation of potential sources of unauthorized non-stormwater discharges at municipally-owned properties. **Observation 4:** Portsmouth has not ensured environmental compliance and good housekeeping at the City municipal yards
Part I.A.1.c. Industrial and Commercial Facilities	**Observation 5:** Portsmouth has not conducting inspections of industrial/commercial facilities and has not ensured compliance with all City storm system ordinances, because of the Dillon Rule of Virginia.
Part I.A.1.d. Construction Sites	**Observation 6:** Portsmouth utilizes available enforcement options to address stormwater problems on construction sites; however, the enforcement process allows noncompliance to continue indefinitely.

INTRODUCTION

From June 4 through 5, 2012, a compliance inspection team comprising of staff from the U.S. Environmental Protection Agency (EPA) Region 3, Virginia Department of Conservation and Recreation (DCR), and EPA's contractor, Eastern Research Group, Inc. (ERG), inspected the municipal separate storm sewer system (MS4) program of the City of Portsmouth, Virginia (Portsmouth or City).

The purpose of this inspection was to obtain information that will assist EPA in assessing Portsmouth's compliance with the requirements of its Virginia Pollution Discharge Elimination System Permit Number VA0088668, as well as the implementation status of its current MS4 Program.

Based on the information obtained and reviewed, EPA's compliance inspection team made several observations concerning Portsmouth's MS4 program related to the specific permit requirements evaluated. Table 1 below summarizes the permit requirements and the observations made by the inspection team.

The EPA Inspection Team obtained its information through a series of interviews with representatives from Portsmouth, along with a series of site visits, record reviews, and field verification activities. The presentation of inspection observations in this report does not constitute a formal compliance determination or notice of violation. All referenced documentation is provided in Appendix 4 and photographs taken during the inspection are provided in Appendix 5. A complete list of documents obtained is provided as a Document Log in Appendix 6. Appendix 7 provides suggestions for how the City might improve the design and implementation of its current MS4 Program. Specifically, Appendix 7 offers assistance and may expand upon certain observations that were presented in the main body of the inspection report.

During the inspection, the EPA Inspection Team obtained documentation regarding compliance with the Permit. Pertinent information may have been obtained prior, and/or after meeting with Portsmouth staff during the physical inspection, and is presented in this report to support the observations. The City of Portsmouth will be provided 30 days to provide comment on the inspections report. The City's comments will be maintained in the City of Portsmouth's file, available upon request.

The report identifies Permit requirements with specific sections cited, and corresponding observations made during the inspection. The format of the report follows the numeric system used in the Permit and is sequential. Sections of the permit are restated with observations about those requirements listed below. For a complete list of all inspection participants, please refer to the sign-in sheets in Appendix 3. The primary representatives involved in the inspection were the following:

Portsmouth:	**Engineering Department** Mr. James Wright, Assistant City Engineer, MS4 Program Director Ms. Kari Lynch, Erosion Control Specialist Ms. Diane Quick, Erosion Control Specialist Mr. Jeffrey Harper, Senior Civil Engineer **Department of Public Utilities and Department Public Works** Mr. Youssef Khalil, Manager of Public Works

	Mr. Frank Wilson, Field Operations Manager, Dept Public of Utilities Mr. Dennis Bagley, Manager of General Services Ms. Cheryl Hawkins, Industrial Hygienist Mr. Zach Jones, Stormwater Technician **Department of Planning** Mr. Fred Brusso, Planning Administrator **Portsmouth Public Schools** Ms. Nita Mensia-Joseph, Director of Operation **Information Technology/Geographic Information Systems (GIS)** Mr. Cliff Sayles, GIS Technician **Fire Department** Mr. John E. Parish, Captain of the Fire Marshal's Office
Parsons Brinckerhoff:	Ms. Cindy Linkenhoker, Senior Water Resources Engineer Ms. Amity Dewey, Engineer
Virginia DCR Representatives:	Mr. Noah Hill, Regional Manager Mr. Jeff Selengut, MS4 Permit Writer Mr. Ved P. Malhotra, Stormwater Compliance Engineer
EPA Contractors: EPA:	Mr. Mark Briggs, ERG Ms. Kavya Kasturi, ERG Ms. Lauren Scott, ERG Mr. Chuck Schadel, Enforcement Officer Ms. Kyle Zieba, Enforcement Officer Ms. Kaitlyn Bendik, Life Scientist

CITY OF PORTSMOUTH BACKGROUND

Portsmouth has been developing and implementing its MS4 Program since 1996. Portsmouth's current coverage under the NPDES permit program became effective on March 8, 2001 with an expiration date of March 8, 2006. Portsmouth reapplied for a permit in 2005, but since DCR has not issued a new permit, by default, the Permit has been administratively continued.

The City of Portsmouth encompasses approximately 33 square miles within the Chesapeake Bay watershed, and is bounded by the James River, the Elizabeth River, and the Cities of Suffolk, Chesapeake, and Norfolk. The United States Census Bureau estimates the total population of Portsmouth to be 95,535 people in 2010.

The Department of Engineering is responsible for the administration of the Permit. The City has approximately 16 personnel, including three inspectors, to implement the MS4 program. Portsmouth funds its stormwater management program using a stormwater utility fees which was initiated on April 25, 1995. The rate structure is based on Equivalent Residential Units (ERUs), which is equivalent to 1,877 square feet of impervious area. The rate was $8.25 per month per ERU effective July 1, 2011. The City expected to raise $6,696,173.08 in revenue from the stormwater utility fee in FY2012, and the proposed 2012 budget was $6,705,600.00.

INFORMATION OBTAINED RELATIVE TO PERMIT REQUIREMENTS

Both wet and dry weather conditions were experienced throughout the inspection activities. Weather history reports from the National Climatic Data Center for Portsmouth, VA indicated that there were 0.06 inches of precipitation in the city during the field work component of the inspection activities. In addition, the weather history reports indicated approximately 2.06 inches of precipitation had fallen within the three days prior to the inspection and approximately 0.09 inches of precipitation had fallen in the three days following the inspection.

Part I.A. of the Permit: Storm Water Management Program

Part I.A. 1.b. Un-authorized Non-Storm Water Discharges (illicit discharge elimination) – A program and schedule to detect and remove, or to notify a discharger to apply for a separate VPDES permit for, un-authorized non-storm water discharges and/or improper disposal into the municipal storm water sewer system.

Part I.A.1.b. (3)
Where necessary, the permittee shall conduct on-site investigation of potential sources of unauthorized non-stormwater discharges. The permittee shall act as expeditiously as possible to require a discharger to eliminate unauthorized stormwater discharges.

Observation 1: Portsmouth Storm Water Technician Zach Jones described Portsmouth's illicit discharge field screening program. Although Portsmouth has an illicit discharge field screening program in place, the data is not being used to identify all types of sources of pollutants that enter the storm system.

Documentation submitted (Appendix 6 – folder titled "865_13&31_Inspection Priorities") as a result of the EPA Inspection Team's request during the inspection indicates that Portsmouth is making an effort to place a priority on screening outfalls in commercial and industrial segments of the storm system. As stated in Best Management Practice (BMP) 5.2.c of Portsmouth's 2006 *Municipal Separate Storm Sewer System Program Plan* (MS4 Program Plan), Portsmouth randomly selects 25 sites for dry weather screening and all sites that were reported as having flows in the previous fiscal year are also revisited and retested. BMP 5.2.c states that stormwater technicians attempt to track dry weather flow back to its source (see Exhibit 1). A review of the dry weather screening results from 2011 shows that some sites have measured dry weather flows and measured pollutants; however, no documentation exists on efforts to find the source of the pollutants. For example, Portsmouth has documented dry weather flows having detergents concentrations above action levels in June 2011 at a manhole located near 2220 Randolph Street (see Exhibit 2).

Part I.A. 1.b. Un-authorized Non-Storm Water Discharges (illicit discharge elimination) – (continued)

Observation 2: Portsmouth currently uses the Tidemark tracking database as a system to respond to citizen complaints and identification by city staff of potential illicit discharges. However, the Tidemark tracking database does not include information on subsequent actions. For example, a number of issues resulted in a letter and educational materials mailed to the property owner; however, the city of Portsmouth did not conduct further investigations to determine if the property owners had stopped the illicit discharge. To date, Portsmouth has not issued any monetary penalties to private property owners for illicit discharges to the storm system.

Part 1, A. of the Permit. STORM WATER MANAGEMENT PROGRAM (SWMP)
The permittee shall implement, to the maximum extent practicable, the provisions of the SWMP required under this Part as a condition of the permit. All applicable components of the Municipal Separate Storm Sewer System Phase I VPDES Permit Application submitted in accordance with 40 CFR 122.26, and all approved modifications are hereby incorporated by reference into the SWMP. The SWMP shall cover the term of the permit and the permittee shall update it as necessary, or as required by the Department of Environmental Quality, to ensure compliance with the statutory requirements of the Clean Water Act §402 (p) (3) (B). Progress towards the goals and meeting specific program components

Portsmouth Storm Water Management Plan (SWMP), May, 2006

Section 8.2 Municipal Operation Centers Source Prevention

BMP 8.2.a Annual Inspections of City Yards
General Description: The City of Portsmouth annually inspects their seven municipal yards to ensure environmental compliance and good housekeeping.

BMP Goals and Objectives:
The purpose of this BMP is to implement a program to ensure that good housekeeping practices are used at City maintenance yards in order to reduce the potential for impacting stormwater runoff to the MS4.

BMP 8.2.b City Yard Stormwater Inlet Identification
General Description: The City of Portsmouth will identify stormwater inlets within City of Portsmouth yards that are part of the City yard inspection program to ensure environmental compliance and good housekeeping.

BMP Goals and Objectives:
The purpose of this BMP is to ensure that extra measures are used at City maintenance yards near stormwater inlets

Section 8.2 of the SWMP **Municipal Operation Centers Source Prevention** (continued)

Observation 3: The Public Facilities Operations Center only has design drawings are available for the storm drain system, and these drawings do not contain all the storm drain inlets or piping. The Public Schools Operations Center facility plan has storm drain inlets shown on the facility layout; however, during the walk-through of the yard area, two additional storm drains not identified on the facility plan were discovered.

Further, at the Facilities Operations Center, yard inspection forms are being completed by a number of different individuals for different areas, one person has not been made responsible for the entire facility. During the EPA Inspection Team's visit to the Facilities Operations Center on June 4, 2012, none of the persons noted as points of contact for inspections of the Facilities Operation Center were available, and therefore the Mr. James Wright, Assistant City Engineer conducted the inspection.

During that inspection, the following stormwater-related issues were identified at the Facilities Operations Center:

- A soil berm located along the property boundary near the salt barn was breached, allowing sediment and stockpiled street sweepings/catch basin cleanouts to migrate to a wet swale adjacent to I-264 (see Photograph 1);
- Oil staining and evidence of recent oil spills were present in soil along the property boundary in an area where vehicles were awaiting service and in a location where trash dumpsters were parked (see Photograph 2);
- Broken electronic equipment was found lying on grass and gravel surfaces near the paint shop (see Photograph 3);
- A 1-gallon can of mineral spirits was tipped on its side and was lying on a pile of scrap metal near the paint shop;
- A dumpster located near the vehicle wash rack was full of trash that had not been removed over a significant time period as evidenced by approximately 3' tall corn stalks growing from the trash in the dumpster (see Photograph 4);
- A spill of fuel from a city-owned vehicle was observed flowing into a storm drain; and,
- Individuals working in the paint shop stated they had just moved approximately five 5-gallon plastic pails containing residual paint and stormwater from an outdoor storage pad to inside the paint shop just prior to the inspection team arriving. Based on the volume of stormwater in the pails (approximately ½ full), and the amount of paint staining on the concrete pad, the paint shop is storing empty but open paint pails outside.

Section 8.3 of the SWMP - Source Prevention at Other Facilities

BMP 8.3.a Schools

General Description: The City of Portsmouth and the Portsmouth Public Schools have entered into an agreement for the purpose of "complying with the Clean Water Act and Phase II of the Virginia Pollution Discharge Elimination System (VPDES) permit process and to provide for discharge authorization, maintenance and installation of the stormwater and/or storm drainage facilities and operations of
Portsmouth Public Schools."

BMP Goals and Objectives:
The goal of this BMP is to ensure school properties follow good housekeeping procedures and comply with VPDES permit requirements.

Observation 4: At the Public Schools Operations Center, the person responsible for stormwater management had left the position in December 2011, and no employee had been identified to replace this person until June 5, 2012, the day of the EPA Inspection Team's visit to this facility. Inspection records from the previous person responsible for stormwater management could not be located. In addition, the person (selected on June 5, 2012) responsible for stormwater management at the Public Schools Operations Center had no storm water-related training.

A number of storm water-related issues were identified, including:

- A review of the site plan for the Public Schools Operations Center indicated an oil/water separator was present but employees were not aware of the unit or its status. The separator contained residual oils and discharged to a wetland area;
- Storm drain inlets are not included on facility layout drawings. During the site walk-through, three storm drain inlets were identified that were not on drawings;
- Diesel fuel was present on a gravel area adjacent to the emergency generator from either a leak or overfill of the fuel tank; and,
- General stormwater awareness training has not been provided to employees and no training has been provided to the newly appointed stormwater manager for the facility.

Part I.A.1.b. (1) of the Permit - City's Storm Sewer System Discharge Ordinance
The permittee shall implement and enforce all provisions of the City's Storm Sewer System Discharge Ordinance which prohibits unauthorized non-storm water discharges to the storm sewer system.

Portsmouth Ordinance - Sec. 31.1-3.(a)(1) - Pollution of the stormwater system.
It shall be unlawful for any person to put, or allow to be put, any process water, wastewater, filth, animal or vegetable matter, chips, shavings or any other substance in the stormwater system, or do any injury thereto, or in any manner pollute the stormwater system.

Part I.A.1.c.(1) of the Permit - Industrial and Commercial Facility Inspections – The permittee shall inspect any new or previously unidentified facilities and may establish and implement control measures as necessary/appropriate for stormwater discharges from these facilities.

Observation 5:

Currently, Public Works relies on the Fire Marshal's Office to alert them if an on-going release is identified during a fire inspection (see also Observation 6). Bases on discussions with Mr. John E. Parish, Captain of the Fire Marshal's Office, the Fire Marshal's Office staff have not been directed nor trained to conduct stormwater inspections. Additionally, based on observations by the EPA Inspection Team, the Fire Marshal's Office staff are not conducting inspections that address improper management of materials that can result in unauthorized non-storm water discharges to the storm sewer system.

On June 4, 2012, the EPA Inspection Team accompanied the Captain of the Fire Marshal's Office while he conducted an inspection of Professional Auto Sales.

A review of Mr. Parish's inspection report for Professional Auto Sales (see Exhibit 3) shows that none of the instances of improper management of materials observed by the EPA Inspection Team during the inspection are included in the report. The instances of improper management of materials observed by the EPA Inspection Team can result in unauthorized non-storm water discharges to the storm sewer system.

The instances of improper management of materials identified by the EPA Inspection Team, but not included on the Fire Marshal's inspection report are:

- Vehicle washing taking place outside on impervious surfaces (see Photograph 5);
- Heavy duty cleaner/degreaser (Purple Power) bucket next to power washer;
- Carwash concentrate bucket next to Shop-Vac;
- Flammable liquid containers stored outside laying on side; and,
- Fluorescent bulbs being stored outside in a stack of tires (see Photograph 6).

Observation 5 (continued):

According to Mr. James Wright, Assistant City Engineer, the Dillon rule denies an entity, such as the City, the authority to enter private property for stormwater inspections. As a result, Mr. Wright stated that Portsmouth has not conducted industrial or commercial inspections. Mr. Wright stated that Portsmouth currently relies on the Fire Marshal's Office to identify potential stormwater-related issues. However, based on discussions with the Fire Marshal's Office, the focus of its inspections is on fire-related issues. Further, training for conducting stormwater inspections has not been provided to the inspectors of the Fire Marshal's Office. Review of the Fire Marshal's reporting form (see Exhibit 3) revealed that the form does not include categories for stormwater nor require the Fire Inspector to make observations related to stormwater.

Part I.A.1.d. Construction Sites – The Storm Water Management Program shall contain a program to continue structural and nonstructural best management practices to reduce pollutants that are discharged through the MS4 in storm water runoff from construction sites. The permittee shall operate in accordance with, and continue enforcement of the requirements of the Subdivision Ordinance (Chapter 33), Zoning Ordinance (Chapter 40), Excavation, Erosion & Sediment Control Ordinance (Chapter 11), Stormwater Management Ordinance (Chapter 31.1) and the Chesapeake Bay Preservation Area Overlay District Ordinance (Chapter 9).

Observation 6: The examples below show Portsmouth utilizes available enforcement options to address stormwater problems on construction sites.

However, the enforcement process allows noncompliance to continue indefinitely, does not compel land developers with a history of chronic noncompliance to stay in compliance, and does not provide general deterrence. Inspectors refer to DCR's field guide as needed when conducting inspections, but Portsmouth does not have a standard operation procedure (SOP) tailored to the city's program. No documentation defines what changes can be made to the approved erosion and sediment control plan in the field. Additionally, no SOP describing the appropriate enforcement action for typical violations is available.

Portsmouth uses notices to comply (NTCs), stop work orders (SWOs), and environmental holds in response to noncompliance with the approved erosion and sediment control plan and charges a fee for each inspection. However, the SWOs only prohibit work related to land disturbing activities, not all activities on-site. In contrast, environmental holds prevent the site from obtaining any building permits. Portsmouth inspectors stated that sites often remain out of compliance until a building permit is needed.

Observation 6 (continued):

The EPA Inspection Team visited the Greenwood Drive site on June 5, 2012. The site was dormant; however, a large stockpile was located on-site (see Photographs 7 through 9). Inspectors had repeatedly noted erosion and sediment control problems (cont.) related to the stockpile; however, because the site was dormant and no permits were needed, the responsible land disturber was not compelled through enforcement actions to resolve the problems. NTCs and SWOs were routinely issued since the start of the project in 2007. At one point, a NTC was issued on 10/15/2010 and the site did not return to compliance until 12/20/2011 (see Exhibit 4).

The EPA Inspection Team visited the Seaboard Square construction site at 2901 Turnpike Rd. After reviewing inspection reports, the EPA Inspection Team observed that this site had chronic erosion and sediment control related problems at the site and had been issued several NTCs and SWOs. For example, on one report the inspectors had observed a dewatering bag that had been sliced open on the bottom to increase the speed of dewatering.

While the inspectors used the available enforcement tools discussed above to rectify the situation Seaboard Square, during the EPA Inspection Team visit on June 4, 2012, a dewatering problem was observed (see Photograph 10 & Photograph 13).

Portsmouth inspectors explained that water had collected near a stockpile on-site after storm events. Prior to EPA's inspection, the responsible land disturber installed a corrugated plastic pipe leading from the area where water collects to the on-site, permanent pond being used as a sediment basin. This temporary measure was approved by the City. According to Portsmouth inspectors, the dewatering system was originally designed with riprap at the inlet of the pipe to slow flow, and silt fencing covered the inlet of the pipe to prevent sediment from entering the pipe. In addition, the outlet of the pipe discharged directly into the pond to minimize erosion of the embankment. Portsmouth inspectors stated that the dewatering was no longer occurring and the pipe had been plugged with concrete at both ends.

While walking around the stormwater pond, the EPA Team and the Portsmouth inspectors observed flow entering the sediment pond from the pipe described above, which had reportedly been plugged (see Photograph 12). The concrete plug used at the outlet of the pipe had been removed and the flow from the pipe had eroded the side of the pond (see Photograph 11). On further inspection, the EPA Team and Portsmouth inspectors observed that the plug had also been removed from the pipe's inlet as well (see Photograph 14).

Observation 6 (continued):

Additionally, the pipe inlet was completely submerged as was the original riprap and there was no silt fence near the pipe inlet. Diane Quick, Erosion Control Specialist with the City immediately called the owner and operator of the site. Gary Haste, ACS and Pat Viola, VICO showed up at the site. The EPA Inspection Team questioned both Mr. Haste and Mr. Viola on the dewatering system. Mr. Viola stated that he directed his people to remove the plugs from the pipe to try to dewater the area again. Neither Mr. Haste nor Mr. Viola contacted the City to make them aware of their decision to begin dewatering that area of the site again.
Before the EPA Inspection Team and Portsmouth inspectors left the site, steps were taken to resolve the issue. Portsmouth inspectors stated they would stop back at the site by COB to inspect the remedies put in place.

Portsmouth tracks inspections, issues, and enforcement in the Tidemark system. Portsmouth inspectors were familiar with the Tidemark system; however, no written manual was available. Portsmouth inspectors stated they received on the job training for learning the Tidemark system and that they keep in close contact to ensure consistency. The inspectors follow particular procedures to use Tidemark, but they are not documented. For example, Tidemark automatically schedules routine inspections every two weeks.

If a problem is found during an inspection, the inspector must manually delete the scheduled routine inspection and schedule a NTC or SWO inspection. Additionally, while a rain event inspection will be noted as such on the inspection form, it may be noted as a routine inspection in the Tidemark database.

In the Tidemark system, Portsmouth inspectors identify issues observed on-site by noting the Virginia 19 minimum standards (MS-19) code in the notes field. The Tidemark "Case Activity Listing" report shows the inspections conducted and the use of NTCs and SWOs, as well as the MS-19 code for problems identified during the inspection.

Information in Tidemark shows that the same MS-19 issues continue to persist regardless of use of NTCs and SWOs. For example, for the 3500 Towne Point site, Portsmouth inspectors routinely identified compliance issues with MS-10 (i.e., storm system inlet protection) starting in June 2011 through December 2011 (see Exhibit 5). Portsmouth inspectors also routinely noted issues with MS-5 (stabilization of earthen structures) and MS-19 (stormwater management) during this time.

An NTC was issued on 9/13/2011 which escalated to an SWO which was released on 10/3/2011. However, the inspectors continued to note issues with MS-5, MS-10, and MS-19 after the release of the SWO until another NTC was issued on 12/8/2011.